

**REMARKS**

Claims 1-9, 31-36, 41-55, and 75-106 are pending. Applicant has amended claims 1, 42, 43, 45, 55, 75, 88-90 and 101 and added claims 102-106.

The Examiner has rejected the claims pursuant to either 35 U.S.C. § 102(e) or 35 U.S.C. § 103(a) on the following bases:

#	Claims	Basis	Reference
1	1-5, 45-50, 55, 75-81, 87-89, 91-99, and 101	35 U.S.C. § 102(e)	Roth
2	1-5, 45-50, 55, 75-81, 87-89, 91-99, and 101	35 U.S.C. § 103(a)	Roth
3	7, 8, 31-35, 41-43, 51, 52, and 82-86	35 U.S.C. § 103(a)	Roth and Copple
4	9 and 53	35 U.S.C. § 103(a)	Roth, Copple, and Goldhaber
5	44, 90, and 100	35 U.S.C. § 103(a)	Roth, Copple, and Bates
6	36	35 U.S.C. § 103(a)	Roth, Copple, and Tulskie
7	54	35 U.S.C. § 103(a)	Roth, Copple, and Eldering
8	1-5, 45-50, 55, 75-81, 87-89, 91-99, and 101	35 U.S.C. § 103(a)	Roth and Davis
9	7, 8, 31-35, 41-43, 51, 52, and 82-86	35 U.S.C. § 103(a)	Roth, Davis, and Copple
10	9 and 53	35 U.S.C. § 103(a)	Roth, Davis, Copple, and Goldhaber
11	44, 90, and 100	35 U.S.C. § 103(a)	Roth, Davis, Copple, and Bates
12	36	35 U.S.C. § 103(a)	Roth, Davis, Copple, and Tulskie
13	54	35 U.S.C. § 103(a)	Roth, Davis, Copple, and Eldering

Applicants' invention in specific embodiments facilitates the revenue-maximizing allocation of advertising display space on an Internet web page. When a server engine generates a web page, a display space system often works with the server engine to add advertisements to the web page. To select an advertisement, some sellers of Internet display space auction the space to advertisers. The advertisers who want to purchase display space for their advertisements submit advertising plans that specify requirements for the types of web pages for which they want to purchase display space, the desired number of ad placements, a bid amount, and so on. When a display space slot is available to have an advertisement added to it, the display space system identifies the advertisement plans where requirements are satisfied by the display space slot. If only one advertisement plan is identified, its advertisement is added to the display slot. When multiple advertising plans are identified, the display space system needs to select one of them for adding to the display space slot. A typical seller may select the advertising plan with the highest bid amount. Although such a strategy will maximize the revenue for that display space slot, it may not maximize the overall advertising revenue for the seller. According to applicants' invention, however, actual advertiser bid amounts may be normalized so that when a web page is accessed the display space slot can be allocated to the advertiser with the highest normalized bid amount. The display system may normalize the bid amount using various factors, such as actual bid amount and the likelihood that the advertiser will be provided with display space slots on the requested number of web page accesses. The highest normalized bid is the bid that is anticipated to lead to the maximum overall revenue. By allocating a display space slot to the advertiser with the highest normalized bid, a received bid may be selected whose bid amount is not the highest of the bids whose advertisement is eligible to be placed in the display space slot on the web page.

A simple example will help to illustrate this. Assume advertiser X has submitted a bid of \$7 for a particular display space auction. Advertiser Y, who just now enters the auction, submits a bid of \$10. In this example, the advertising plan for X has only one day remaining and 100 ads yet to be placed, while Y's advertising plan is set for 10 days

and 300 desired ads. Each day, there are only 100 available display space slots that match both advertising plans. A conventional auction system is designed to accept only the highest bid. Thus, Y's bid of \$10 would win the next 100 display space slots, and X would end up with 100 unplaced ads. A seller of the display space who uses the conventional technique misses out on \$700 in potential revenue from X. An auction system according to applicants' invention, in contrast, would use normalized bid amounts to capture this \$700 in revenue. Since Y has 1000 total slots to get its 300 ads placed, there is no rush for the seller of the display space to place all of Y's ads immediately. Advertiser Y's normalized bid amount will thus change little, if at all, from the submitted bid. Advertiser X's bid, however, will be normalized to a higher amount (e.g., greater than \$10) to account for the lack of remaining time in X's advertising plan. As such, it is highly likely that many (and maybe all) of the next 100 display space slots will be sold to X at its actual bid of \$7 each, despite the fact that Y had maintained a higher actual bid throughout. Advertiser Y then has the next 900 display space slots to place its 300 desired ads. In the end, by accepting X's lower bid amounts early on in Y's advertising plan period, the potential overall advertising revenue for the display space seller is raised, and the seller may now be able to collect revenue for all of the desired ad placements for both X and Y.

Roth discloses a "method and system for providing advertisements from a central server to viewers who access web sites." Roth, 1:66-2:1. "[T]he central server system stores both advertisements which are to be displayed and an information data base. The data base includes information about viewers, information about the characteristics of particular web sites and other information relevant to which advertisements should be displayed for particular viewers." *Id.*, 2:1-7. "[E]ach advertiser provides one or more 'proposed bids' which specify how much the advertiser is willing to pay for displaying a particular advertisement in response to a [display space] with certain characteristics." *Id.*, 2:20-23. Roth further discloses a bidding system that includes bidding agents 30A-30Z and bid selection logic 16C. See, e.g., *id.*, Figure 1. "The bidding agents 30 compare the information about the [display space] to the proposed bids that have been

submitted by advertisers. That is, the bidding agents **30** determine if the characteristics of the [display space] meet the criteria in the proposed bids and if so they submit bids to bid selection logic **16C** . . ." *Id.*, 5:27-32. "[T]he bid selection logic **16C** compares various bids and selects the highest bid and therefore an advertisement for display." *Id.*, 5:33-35 (emphasis added); see also *id.*, 7:19-23, 7:29-33. The advertisement corresponding to the "winning bid" is then sent from the data base to the viewer's browser. See, e.g., *id.*, 5:35-37. Roth thus does not contemplate the selection of an advertiser bid that is not the "highest bid."

Davis discloses a technique that allows network information providers (e.g., advertisers) to influence the position for a search listing within a search result list generated by an Internet search engine. See, e.g., Davis, Abstract; see also *id.*, 5:1-14 (describing network information providers or web site promoters as "advertisers"). "The [advertiser] influences a position for a search listing in the provider's account by first selecting a search term relevant to the content of the web site or other information source to be listed." *Id.*, Abstract. The advertiser then "influences the position for a search listing through a continuous online competitive bidding process." *Id.* The bidding process of Davis occurs when an advertiser enters a bid amount for a search listing. *Id.*, 5:62-64. "This bid amount is compared with all other bid amounts from other [advertisers] for the same search term, and generates new rank values for all search listings having that search term. The rank value determines the position where the [advertiser's] web site description will appear on the search results list page . . . . A higher bid will result in a higher rank value and a more advantageous placement . . . ." *Id.*, 5:65-6:7 (emphasis added); see also *id.*, 9:42-43, 13:13-24, 18:13-17 ("The highest bid amount receives the highest rank value, the next highest bid amount receives the next highest rank value, proceeding to the lowest bid amount, which receives the lowest rank value."), Figure 7 (showing multiple advertising display spaces within a search result where each individual display space is matched with the advertisement having the highest available bid in descending order). Accordingly, Davis does not describe the selection of an advertiser bid that is not the "highest bid" for any particular display

space. Instead, Davis selects the highest bid as each available display space is matched with an advertisement.

All of the pending claims include the language "selecting . . . a received bid whose bid amount is not the highest," or similar language. For example, claim 1 recites "selecting, based at least in part on review of bid amounts and on a likelihood that the advertisement will be placed on the requested number of web pages during the time period, a received bid whose bid amount is not the highest of the bids whose advertisement is eligible to be placed in the display space slot of the web page," and claim 45 recites "a component that selects a bid based on bid amount and display page eligibility stored in the database, wherein the selected bid does not have the highest bid amount of those bids whose advertisement is eligible to be displayed in the advertising space slot of the display page to maximize overall revenue received from placement of advertisements."

In contrast to applicants' invention, Roth discloses always selecting the highest bid. Each of Roth's bidding agents decides whether to bid on a display space. A bidding agent, as its name suggests, is a program that works on behalf of an advertiser to place bids in real time for display space. A bidding agent (that decides to bid) may establish an actual bid by factoring in how well the criteria of the display space matches the desired criteria of the advertiser and factoring in whether the advertiser will have the desired number of advertisements placed. For example, if a display space slot only marginally satisfies the advertiser's criteria, then the bidding agent may place a bid that is low compared to the bid that would be placed if the display space slot fully satisfied the advertiser's criteria. As another example, if a bidding agent determines that the desired number of advertisements is not being placed, then the bidding agent may submit a bid that is higher than the bid that would be placed in a situation that is similar except that the desired number of advertisements is being placed. Thus, Roth's bidding agent is simply a proxy for an advertiser and automates the advertiser's policy of

deciding when and how much to bid for display space so that bids can be placed in real time.

Once Roth's bidding agents place bids, Roth's bid selection logic always selects the highest bid. The advertiser with the highest bid is awarded the display space slot and that advertiser is charged its bid amount. Roth does not disclose the selection of a bid that is not the highest bid.

Nonetheless, it is the Examiner's position that:

In the case where an under-achieving ad is influenced enough by the optimization process so as to be selected over a higher, competing proposed bid, the ad process can be said to have selected an ad associated with a [sic] advertiser-submitted bid that is not the highest. System-increase of a low proposed bid so that the ad gets chosen is taken to be functionally the same as selecting a lower bid for an under-achieving ad.

Office Action, January 13, 2005, at 4. The Examiner's position as to "functionally the same as" is based on a misunderstanding of Roth's "proposed bid" and the distinction between an advertiser submitting the highest bid at an auction and winning and submitting a bid that is not the highest and winning. More importantly, the test for patentability is whether an invention is obvious and not whether an invention is "functionally the same as" something else as the Examiner seems to suggest.

First, the Examiner misunderstands Roth's "proposed bid." A proposed bid "specifies how much the advertiser is willing to pay for displaying a particular advertisement in response to a [display space] with certain characteristics." Roth 2:20-23. "The amount bid for a [display space] can be dependent on as many criteria as the advertiser cares to specify." Roth 2:35-37. A proposed bid is not a set bid amount that is somehow increased by the "system," rather a proposed bid is simply an expression of the bidding policy of an advertiser that the advertiser's bidding agent will implement. Thus, Roth has no "low proposed bid" that is somehow increased by the "system" as the Examiner suggests.

Second, the Examiner is confusing the process of an advertiser deciding how much to bid (e.g., the process of Roth's bidding agent) with the auctioneer's process of deciding which bid to select as the winning bid (e.g., the process of Roth's bid selection logic). Applicants' claims are directed to the process of deciding which bid to select as the winning bid, and not to the process of deciding how much to bid.

The Examiner's position more simply stated is that applicants' invention is obvious because an advertiser, who would otherwise bid a low amount, bids a high amount for some reason and thus wins the auction. The Examiner believes that this first scenario is "functionally the same as" a second scenario in which the advertiser places a low bid and the auctioneer decides for some reason to select that low bid amount as the winning bid.

The Examiner is wrong. These scenarios are not "functionally the same." One major difference is that the advertiser is charged the high bid amount in the first scenario and the low bid amount in the second scenario. Of course, the advertiser sees a significant difference in the amount that the advertiser is charged in these two scenarios. Moreover, in the first scenario no attempt is made to maximize the advertising revenue of the seller. This difference in revenue maximization can be illustrated in reference to the example of Section V.A.1 of this brief. Recall that, by selecting a bid amount that is not the highest, applicants' invention may maximize the overall advertising revenue of the seller by collecting \$700 from advertiser X and \$3000 from advertiser Y. Roth's technique, which always selects the highest bid, would only generate \$3000 in revenue because (1) Y's higher bid would always be selected before X's bid and (2) X's time period would expire with 100 ads left unplaced. Thus, the seller would be foregoing \$700 in revenue.

The Examiner may argue that X's bidding agent could bid a higher amount and would win the auction. X's bidding agent, however, absent some collusion with Y or breach of Y's confidentiality by the auctioneer, does not know to bid a higher amount. Moreover, even if X knew the amount needed to win, X might not be able to afford or

even want to bid a higher amount. Thus, X's decision for whatever reason not to bid a higher amount results in the seller losing revenue, which a system implementing applicants' invention could capture for the seller.

The Examiner has not cited any portion of Roth that discloses the selection of a proposed bid that is not the highest bid. Further, the Examiner has not identified anywhere that Roth suggests or teaches the selection of a proposed bid that is not the highest bid. Roth simply does not do so. In fact, Roth specifically states that the bid selection logic "selects the highest bid." *Id.*, 5:34, 7:21, 7:31-32. Thus, the Examiner has not identified any prior art reference that discloses the selection of a proposed bid that is not the highest bid, as recited in the pending claims. If a *prima facie* case of anticipation or obviousness has not been established, "then without more the applicant is entitled to grant of the patent." *In re Oetiker*, 977 F.2d 1443, 1445, 24 U.S.P.Q.2d (BNA) 1443, 1444 (Fed. Cir. 1992). Since the Examiner has not presented a *prima facie* case of anticipation or obviousness, the pending claims should be allowed.

Similarly to Roth (discussed above), Davis also does not disclose the selection of a proposed bid that is not the highest bid. Nonetheless, the Examiner characterizes Davis as follows:

Davis et al teaches ad opportunities that each call for include [sic] plural, targeted ads that are to be placed on the page according [sic] descending bid amounts. It would have been obvious to one of ordinary skill at the time of the invention to have auctioned ad opportunities using the system of Roth et al whereby plural winning ads are selected in a manner as taught by Davis et al. This would increase advertising revenue. Any of the second or lower-placed ads correspond to selected bids other than the highest bid.

Office Action, January 13, 2005, at 9. The Examiner is mistaken. Davis does not disclose the selection of a bid that is not the highest for a display space slot. On the contrary, Davis selects the highest bid as each available display space slot is matched with an advertisement. Moreover, if multiple display space slots are available, Davis selects the highest eligible bid to fill the first display space slot. Davis again selects the

highest eligible bid to select the next display space slot. Davis always allocates display space slots to the eligible advertisement with the highest bid and makes no suggestion to the contrary.

Davis does describe that an advertiser "influences a position for a search listing in the provider's account by first selecting a search term relevant to the content of the web site or other information source to be listed." Davis, Abstract. The advertiser then "influences the position for a search listing through a continuous online competitive bidding process." *Id.* The bidding process of Davis occurs when an advertiser enters a bid amount for a search listing. *Id.*, 5:62-64. "This bid amount is compared with all other bid amounts from other [advertisers] for the same search term, and generates new rank values for all search listings having that search term. The rank value determines the position where the [advertiser's] web site description will appear on the search results list page . . . . A higher bid will result in a higher rank value and a more advantageous placement . . . ." *Id.*, 5:65-6:7 (emphasis added); see also *id.*, 9:42-43, 13:13-24, 18:13-17 ("The highest bid amount receives the highest rank value, the next highest bid amount receives the next highest rank value, proceeding to the lowest bid amount, which receives the lowest rank value."), Figure 7 (showing multiple advertising display spaces within a search result where each individual display space is matched with the advertisement having the highest available bid in descending order). Accordingly, each time Davis selects an advertisement for a particular display space slot, Davis selects the eligible advertisement with the highest bid amount.

Davis auctions display space in a search result listing. For example, a web page may have eight spaces, meaning that it can display eight links to web pages of a search result listing as shown in Figure 7 of Davis. Davis allocates a number of the spaces to paid links and the rest to unpaid links. In the example of Figure 7, Davis allocates six spaces 710a-710f to paid links. According to Davis, the advertiser who places the highest bid for a space on the web page is awarded space and has its ad placed in the

first position or highest space, the advertiser who places the second highest bid has its ad placed in the second highest space, and so on.

Since Davis always awards the highest available display space to the highest eligible bid, Davis maximizes revenue for each individual web page, but may forego the overall revenue that applicants' invention captures. Although Davis's multiple bids for multiple display spaces can result in a more complex analysis for overall revenue maximization, a simple scenario can illustrate the difference between Davis's technique and applicants' invention. For this scenario, assume that a web page has six spaces for paid advertisers and assume that the five highest bids have been awarded the five highest display spaces as Davis teaches. Given these assumptions, the auction for the sixth and last space can be analyzed in a manner similar to the example of Section V.A.1 of this brief. If advertiser X bids \$7 and only has time to place one more ad and advertiser Y bids \$10 and has plenty of time to place its desired ad, then it would maximize the overall revenue of the seller to award the last display space slot to X, rather than Y. By awarding the last position of the web page to X's lower bid, the seller would receive \$7 from X for the last display space slot of the web page and then would receive \$10 from Y when Y is eventually awarded display space slot on a different web page for its ad, for a total additional revenue of \$17 for the two ads. In contrast, by awarding the last display space slot of the web page to Y's higher bid amount, the seller would maximize revenue for that display space slot, but would reduce overall revenue. By awarding the last display space slot to Y, the seller would receive \$10 from Y, but would not receive \$7 from X because X's ad would be left unplaced, for a total additional revenue of only \$10.

Based upon the above amendments and remarks, applicants respectfully request reconsideration of this application and its early allowance. If the Examiner has any questions or believes a telephone conference would expedite prosecution of this application, the Examiner is encouraged to call the undersigned at (206) 359-8548.

Respectfully submitted,

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Date: 10/31/07

  
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